Periscope.

PHYSIOLOGICAL.

Voluntary Motion as Influenced by Sensory Disturbances.—D. T. Polakoff (*Archive. of Psychiatry, Neurology and Legal Psycho-pathology*, Russian).

P. comes to the following conclusions reached by aid of the experimental method :

1. The anæsthesia of the upper lip of the horse as produced by bilateral section of the infra-orbital nerves effects a paralysis like state of the upper lip (pseudo paralysis), so that voluntary movements of the upper lip with the purpose of seizing the food are, impossible ; to compensate this defect the animal uses its lower lip, tongue and teeth with increased energy. This paralysis is not complete as occasionally voluntary movements of the upper lip with the purpose of seizing the food are noticed, but these movements are rare, weak and inco-ordinated.

Unilateral section of the infra-orbital nerve of the horse causes slight although distinct disturbances of the voluntary movements of the upper lip.

2. Anæthesia of the tongue of dogs is effected by bilateral section of the lingualis,and section of glosso pharyngeus nerves causes slight disturbances of the swallowing movements of the tongue, which disturbances soon disappear entirely. But if the mucous membranes of the hard palate, gums, mouth and cheeks of the dogs thus operated upon, or of normal dogs (to the latter the tongue must also be cocainized), are made anæsthetic by pointing with a five per cent. watery solution of cocaine muriate, the swallowing movements of the tongue become intensely disturbed ; they become weak, awkward, inco-ordinated, and do not fulfill the purpose they are intended to serve.

3. The above mentioned motor disturbances of the upper lip of the horse and of the tongue of the dog depend exclusively on the anæsthesia of these organs, as a lesion of motor paths peripheric and central was out of question.

4. Intense disturbances of the voluntary movements of the anæsthetised organ will follow only when the anæsthesia is complete and involves the whole organ, or eventually even the adjoining parts ; the complete anæsthesia of the tongue of dogs did not suffice to effect marked disturbances of its voluntary motions, this result being reached, however, when besides the tongue itself, the mucous membranes of the mouth, gum and cheeks were made anæsthetic.

The author concludes that for the primary excitation and appropriate performance of voluntary movements, simultaneous or previous sensory impressions, are needed. Under normal circumstances the sensory stimulus comes from the given organ itself, and communicates itself in the most direct way to the corresponding subcortical or cortico motor centre. When the said organ is anæsthetic the sensory impulse has to come from adjoining, or eventually even from removed organs in which case it will have to pass through unusual paths to the motor centres of the given organ, but may yet be a sufficient impulse for the production of appropriate voluntary movements. Thus it is explained how patients with extended anæsthesia of extremities may walk well, press one's hand or hold some object in their hands, if they perform these actions with open eyes, that is by help of visual impressions, while with the eyes closed their gait becomes disturbed, they fall easily, they let the object fall from their hands, etc. ONUF.

PATHOLOGICAL.

Crossed Hemianæsthesia and Hemiparaplegia (*Syndrome de Brown-Séquard*) ***From Medullary Concussion.***—Reynes (*Gazette des Hopitaux*, March 26, 1895), from a study of this subject comes to the conclusions that—1. Medullary concussion by causing unilateral lesions (hematomyèlie?) can give rise to the syndrome of Brown Séquard. 2. Medullary concussion can cause a dilatation of the iris. 3. The points of origin of the great sympathetic are in the dorso-lumbar medulla. FREEMAN.

CLINICAL.

The Differential Diagnosis of Traumatic Intracranial Lesions.—Charles Phelps (*N. Y. Med. Journal*, November 10, December 8, 15, 22, 29, 1894, and January 5 and 12, 1895.

After an exhaustive and critical consideration of the above subject from a practical point of view, the author summarizes his conclusions as follows :

Hæmorrhages,—The morbid conditions which may directly result from traumatic intracranial hæmorrhages are : an abnormal temperature, a complete or partial loss of consciousness, a change in the character or frequency of the pulse or respiration, a disturbance or abrogation of muscular function, and an irregularity of the pupils. These conditions are subject to complication, modification, or supersedure by the symptoms of coexistent lesions.

A continued subnormal temperature is characteristic of large and comparatively uncomplicated hæmorrhages, and as these are more frequently of epidural character, it may be regarded as to a certain extent diagnostic of the variety as well as of the class. The absence of symptoms indicative of parenchymatous injury will be confirmatory of the opinion that an existent hæmorrhage is derived from the epidural vessels. Associated symptoms of diffused contusion suggest a pial, and those of laceration a cortical, hæmorrhage. In the majority of cases the primary record of temperature is from 99° to 99° +, and in any case in which, then or afterward, it exceeds 101° +, or probably 100°, the elevation is due to an associated lesion. It follows that in pial or cortical hæmorrhages the temperature has a higher range than in those of epidural origin, and is proportionate to the extent and importance of the complication. The bilateral variation to which the axilary temperatures are subject is not peculiar to this result of injury.

The primary unconsciousness which is of frequent occurrence in cases of hæmorrhage is a symptom of complicating general contusion ; the secondary unconsciousness, due to the loss as well as the pressure of blood effused, follows with or without an interval of restored consciousness, dependent upon the severity of the diffused injury of the parenchyma and the rapidity of the hæmorrhagic effusion, and is partial or complete in proportion to its amount. Consciousness is always lost in fatal cases ; it is retained in fifty per cent. and more in recovering cases, even in those demanding operation.

The character and frequency of the pulse have no definite relation to the form, location, or amount of hæmorrhage. The pulse may be normal, slow, or frequent in large extravasations wherever situated ; but frequency is of so much more usual occurrence in hæmorrhage than in